appendages of the mother organ. The stem must first be present, then comes the leaf. For this formation we must have a name, as we cannot consider it a stem of any grade or rank.

This may be still farther illustrated by the examination of a plant like *Nitella* or *Chara*. Here the main branch sends off side-branches which in turn develop other side-branches, but these differ in rank, the higher the number, or the farther its distance from the main stem, the smaller the branch. There is no difference in principle but only in rank, so there is no need for term leaf here. There is but one idea, the repetition of the main stem, but on a smaller scale.

This makes the idea of leaf and stem a fixed one which holds through all the different groups of plants. The fact that the *Blasia* thallus is not homologous with the leafy fern stem has nothing whatever to do with the idea of the leaf. This is entirely independent of phylogenetic considerations, has to do simply with the ontogenetic facts, consists either of stem and leaf, or thallus. According to Professor Schwendener also, the transition forms are not so distinct as Goebel makes them. As soon as a leaf-like organ appears, the mother organ is to be named stem; so in *Marchantia*, that which is ordinarily called thallus is really stem, as it is that member from which another member unlike itself originates.

This conception of the relation between leaf and stem not only obviates the difficulty to which Goebel refers in defining the word leaf, but agrees perfectly with the manner in which it is supposed to originate. Those who accept this view, therefore, find no inconsistency in retaining the word cormophyte, neither in the use of the terms stem and leaf as applied to the organs of the moss plant.

NEW YORK, June 1, 1896.

Botanical Notes.

CASSIA PROBOSCIDEA n. sp. Cassia sectioni Oncolobio pertinens, erecta, herbacea (?), glabra vel leviter glanduloso-pubescens. Foliola 4–5-juga, ovata, anguste acuta, marginibus ciliata, 1.5–3 cm. longa. Petiola basiglandulosa, glandulis hemisphericis, sessilibus.

Racemi terminales, pauciflori. Flores flavi, petalis oblongis, longitudine 1 cm. Antheri perfecti 6, duobus superioribus majoribus, filamentis quam alteris longioribus. Staminodia 3. Legumen glabrum, coriaceum, conspicuiter rostratum, cylindricum vel leviter compressum. Semina transversa, oblonga. Cotyledones plani.

Collected by J. F. Waby at Hastings, Barbadoes, April–June, 1895. (No. 24.) Type in the United States National Herbarium.

The basal petiolar gland and cylindrical pod containing seeds parallel to the dissepiments fix the position of this Cassia in Vogel's section Oncolobium, under which Bentham enumerates in his revision ten species.*

The plant is unique, however, in the possession of a pod tapering abruptly into a narrow proboscis-like beak, which occupies about one third of its total length. The pods of *Cassia Manzanilloana* Rose, from Mexico, exhibit a slight tendency to become rostrate; but the beak is never obviously developed. Mature seeds from the type specimen have been planted in the greenhouse, in the hope that the plant may be successfully cultivated and distributed.

CHARLES LOUIS POLLARD.
WASHINGTON, D. C.

Euphorbia Nicaensis. A few days ago I visited the locality for this rare spurge, which was discovered near Vestal, N. Y., by Mr. C. F. Millspaugh in 1885. The plant is apparently increasing and grows luxuriantly, some stems being four feet in height.

On the day I saw it the plant was in full blossom, and looked at first glance like a field of Golden Rod nearly ready to bloom. It is found in greatest profusion about a lock of the abandoned New York and Pennsylvania Canal, and from thence has spread to the roadside and adjacent fields.

In the majority of the plants the floral leaves are greenish or yellowish green, but in some individuals this varies to deep yellow. In these the floral leaves are usually larger than in the others. Plants that are completely sterile, with floral leaves and no flowers, are also common.

The sixth edition of Gray's Manual gives Binghamton, N. Y., as the only station for the plant, but I understand it has since

* Trans. Linn. Soc. London, 27 : 530-535. 1871.

been found along the Susquehanna river at Athens, Pa., perhaps derived from the Vestal locality and carried there by the stream.

WILLARD N. CLUTE.

BINGHAMTON, N. Y.

Sisymbrium altissimum L. The Tumble Mustard has entered Michigan. The writer found over one hundred plants of this dreaded weed at Benton Harbor, Mich., June 13, 1896.

C. F. WHEELER.

Reseda lutea. We notice a reference in the June BULLETIN to *Reseda lutea* L., having been found in New Jersey.

In July of 1894 we collected specimens of this plant in meadows at East Windsor, Ct., on what could not have been ballast ground.

C. H. BISSELL.

Reseda lutea was collected by Miss Powers at Baldwins, Long Island, in 1895, and has been reported to me from Michigan, by Mr. S. H. Camp.

N. L. B.

Erythea. The editor of the "Journal of Botany," in referring (June issue, p. 280) to the part of Professor Greene's "Pittonia" recently distributed, makes a statement concerning "Erythea" which is about as accurate as his recently printed tabulation of the dates of publication of the BULLETIN during 1895. He says "Erythea, of which Prof. Greene was the moving spirit, seems to have come to an end, no number having appeared since December last." As the journal has been issued every month, this statement can only be understood by realizing that a restricted or insular notion as to the significance of "to appear" pervades the mind of the learned editor.

Reviews.

The Characeae of America. By Dr. T. F. Allen. Part 2, fascicle III. April, 1896.

This contains descriptions and illustrations of ten species of *Nitella*, two of which are new, *N. Leibergi* and *N. transilis.* The other species figured and described are *N. mucronata, N. capitellata, N.*